has some distinct advantages over the existing borate fusion or peroxide fusion decomposition methods. In this method there is no necessity for platinum ware or high-temperature burners, the dissolution of the fusion mass is troublefree, and corrosion to the nickel crucible used for fusion is insignificant. The method is practically free from chemical interferences and background noise because tin is selectively extracted under the experimental conditions. However, Ti, V, Mo, W, Nb, and Ta are likely to be extracted along with Sn under the experimental conditions. However, in silicate rock and cassiterite samples, the concentration of these elements is very low and does not cause any interferences. There is also appreciable gain in atomic absorption sensitivity because of atomic absorption measurements in the organic phase.

The proposed method has been applied to the determination of tin in a number of cassiterite-bearing samples and the results are shown in Table I. Precision and accuracy of this method have been studied by analysis of CANMET standard reference materials MPla and MP2 which shows good agreement with the reported value with an RSD of 6.4%.

TABLE I
Determination of Tin in Cassiterite-Bearing Silicate Rocks

Sample	Sn (%) Present method[a]	Sn (%) XRF method
CANMET MP2	0.05	0.05[b]
Pegmatite	2.04	2.01
Pegmatite	0.68	0.66
Cassiterite	5.14	5.18
Cassiterite	9.24	9.20
Cassiterite	17.26	17.35
CANMET MPla	1.18	1.25[b]

[a]Average of five determinations.
[b]Recommended value.

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